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Research and Sponsored Programs Office (RSPO)

Sponsored Research Annual Reports

2014

Sponsored Programs Research / Fiscal Year Annual Report 2014

Naval Postgraduate School

Monterey, California: Naval Postgraduate School.

<http://hdl.handle.net/10945/45554>



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SPONSORED PROGRAMS RESEARCH

FISCAL YEAR ANNUAL REPORT 2014



PROGRAM OVERVIEW

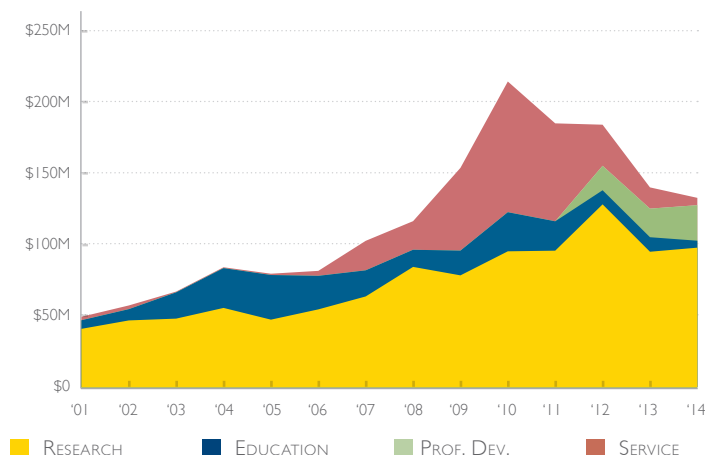
The Naval Postgraduate School (NPS) has a robust sponsored research and education programs that work to provide the faculty, staff, and equipment needed for a strong, viable graduate school. Sponsored programs (research, education, and professional development) are integral to the Naval Postgraduate School mission. The research programs support graduate education by providing militarily relevant thesis topics that address issues from the current needs of the Fleet and Joint Forces to the science and technology required to sustain long-term superiority of the Navy/DoD. Research varies from the very fundamental to the very applied and covers all levels of classification. Sponsored research includes:

- Basic and Applied Research
- Individual and Interdisciplinary Group Projects
- Fleet Support
- Cooperative Research and Development Agreements

Sponsored education programs include Integrated graduate education and research in space systems, total-ship systems engineering, combat systems, systems engineering and homeland security and defense, supplemented by off-campus graduate and certificate programs.

Professional development programs utilize NPS faculty expertise and student experience to support various communities within the Navy and DoD through short courses and web-based services.

SPONSORED PROGRAM PROFILE FY 2001-2014 (FUNDS EXPENDED)



In FY14, NPS had available over \$120.9M (not including carryover funds from prior years) in sponsored program funding. Total expenditures in FY14 exceeded \$132.5M.

SPONSORED PROGRAM EXPENDITURES

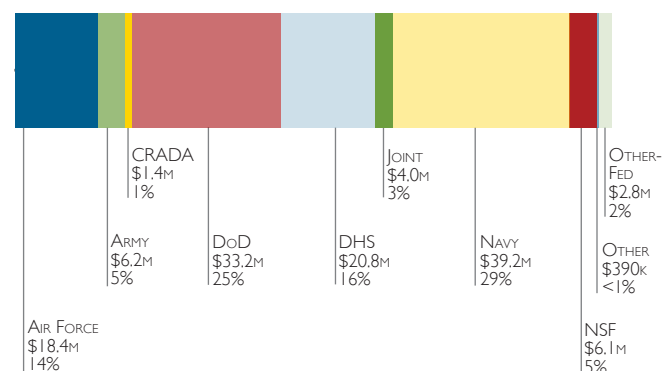
1 October 2013–30 September 2014

Total Expenditures: \$132.5M

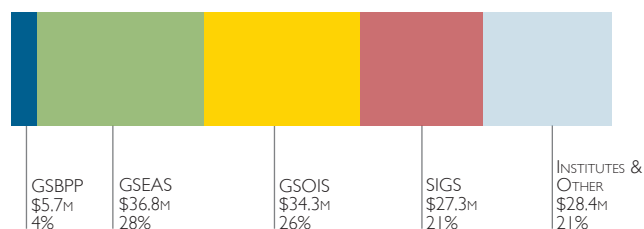
BY TYPE OF ACTIVITY.....



BY SPONSOR



BY NPS ORGANIZATION



GRADUATE SCHOOL OF BUSINESS AND PUBLIC POLICY

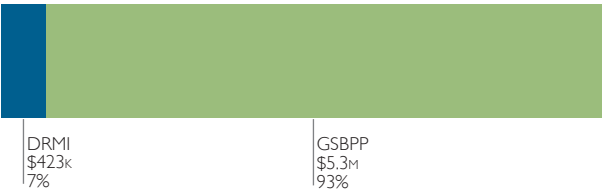
The Graduate School of Business and Public Policy (GSBPP) offers unique residential defense-focused MBA and Master of Science in Management programs, plus master's degrees in four other DoD-relevant areas. Faculty research is an important component of the school and strives to support military decision making, problem solving, and policy setting; improve operational and administrative processes, and organizational effectiveness; contribute knowledge to academic disciplines; and advance the mission of graduate education.

The research program is fully integrated into the educational process. Curriculum sponsors and other DoD organizations fund faculty research; students participate in these faculty projects and undertake research of their own in their capstone MBA projects, and faculty research results are incorporated into classroom instruction.

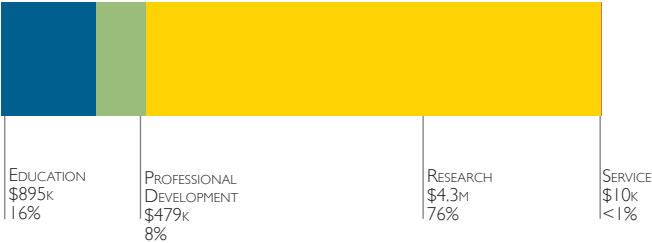
Topics and issues can be grouped into five broad functional areas: acquisition and contracting; budgeting and financial management; operations and logistics management; manpower-systems analysis; and policy formulation, analysis, and management.

TOTAL EXPENDITURES: \$5.7m

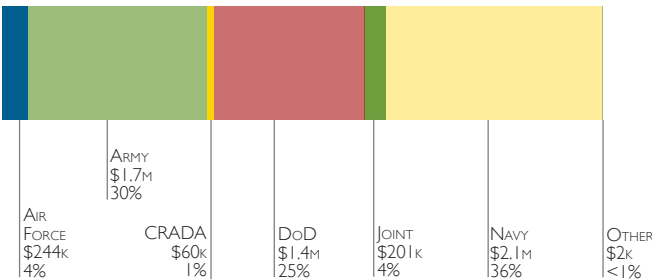
BY DEPARTMENT



BY TYPE OF ACTIVITY.....



BY SPONSOR

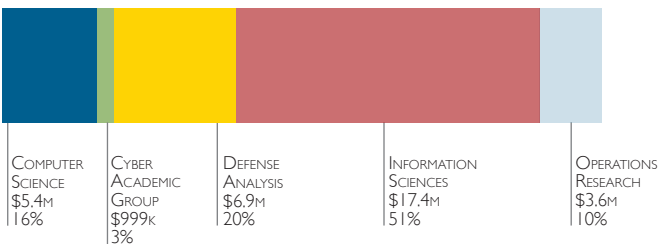


GRADUATE SCHOOL OF OPERATIONAL AND INFORMATION SCIENCES

GSOIS resident programs consist of 21 technical curricula and award master of science and Ph.D. degrees across five academic departments. Responding to the needs of naval and military customers, graduate education and research are focused in six military important domains: information science and technology; computer science; operations analysis and operational logistics; human-systems integration; systems engineering analysis; and special operations and related defense analyses. The emphasis of sponsored research and studies activities is on the development, integration, and application of mathematical, scientific, and technical skills that contribute to advances and improvement in military systems and operations, and related areas of national defense and security.

TOTAL EXPENDITURES: \$34.3m

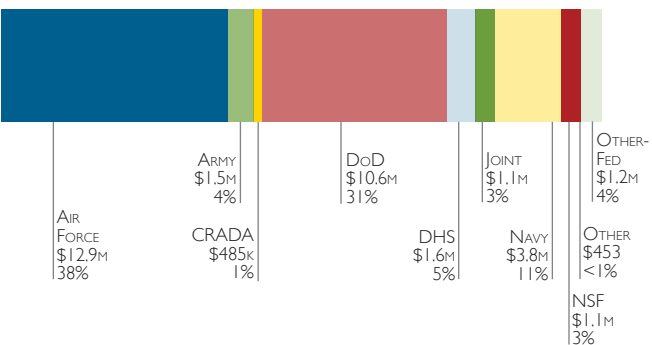
BY DEPARTMENT



BY TYPE OF ACTIVITY.....



BY SPONSOR

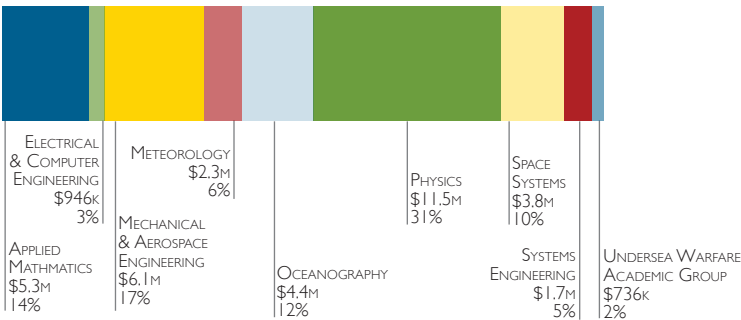


GRADUATE SCHOOL OF ENGINEERING AND APPLIED SCIENCES

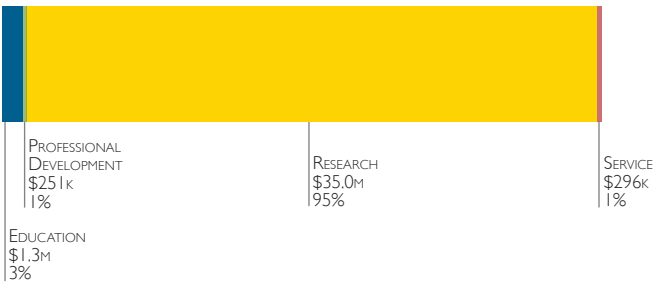
GSEAS education leads to the master of science, engineer, and doctor of philosophy degrees and contains seven technical academic departments (applied math, electrical and computer engineering, mechanical and aerospace engineering, meteorology, physics, oceanography, systems engineering) and two interdisciplinary academic groups (space systems and undersea warfare). These entities offer degree programs tailored to the Navy and defense community, while providing technical foundations for student theses and interdisciplinary faculty and student projects. Research centers and unique laboratory facilities (e.g., unmanned and autonomous vehicles, robotics, free-electron lasers, spacecraft research and design, remote sensing, rockets and combustion, signal enhancement, ocean acoustics, interactive digital environment analysis, secure space-systems research, secure computer networks, materials research, cyber warfare and directed energy) add rigor to the resident academic and sponsored programs.

TOTAL EXPENDITURES: \$36.8M

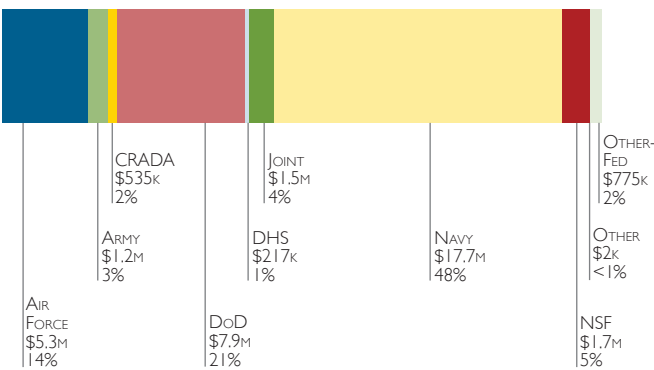
BY DEPARTMENT



BY TYPE OF ACTIVITY



BY SPONSOR



SCHOOL OF INTERNATIONAL GRADUATE STUDIES

The School of International Graduate Studies (SIGS) specializes in research and graduate education focused on security studies, international relations, regional security and area studies, international political economy, and U.S. security policy. Programs identify and address security challenges, develop civilian and military interagency alliances, and strengthen multilateral and bilateral defense cooperation between the U.S. and other nations.

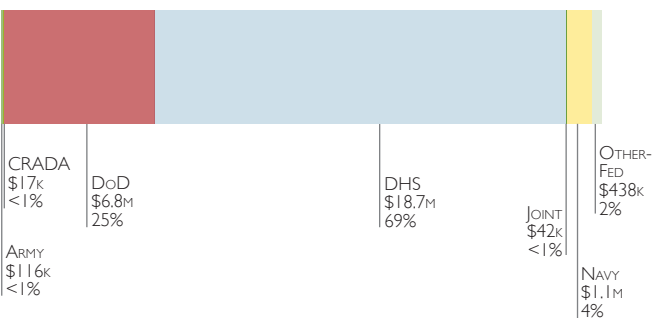
SIGS components include the department of National Security Affairs, The Global Center for Security Cooperation, and Center for Civil-Military Relations. Statistics shown are for National Security Affairs only, which includes the Center for Homeland Defense and Security.

TOTAL EXPENDITURES: \$27.3M

BY TYPE OF ACTIVITY



BY SPONSOR



RESEARCH AND EDUCATION INSTITUTES AND CENTERS

NPS’s research and education institutes and centers apply interdisciplinary research to military challenges, they facilitate degree programs, and they deliver executive and continuing education. Research centers, in particular, emphasize practical application of their results.

The Cebrowski Institute is a hub of innovation for the information revolution in military and security affairs for the Navy, DoD and nation. The CI helps generate ideas for information strategy and tactics and supports the information entrepreneurs who champion these ideas, promoting them in the Navy and DOD and working with leaders and networks to bring them into practice.

The MOVES Institute investigates modeling, virtual environments, and simulation, with projects in 3D visual simulation, networked VE, computer-generated autonomy, computational cognition, human-performance engineering, immersive technologies, gamebased simulation, combat modeling and analysis, and medical modeling and simulation.

The Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPAS) provides manned aircraft, remotely piloted aircraft and ground based radars for scientific research, especially that based on atmospheric and oceanographic observations, payload integration, CONOPS development, flight-safety reviews, logistics, and flight support.

CRUSER provides a collaborative environment for the advancement of educational and research endeavors across the Navy and Marine Corps. The Consortium seeks to capitalize efforts, both internal and external to NPS, by facilitating active means of collaboration, providing a portal for information exchange among researchers and educators with collaborative interests, fostering innovation through directed programs of operational experimentation, and supporting the development of an array of educational ventures.

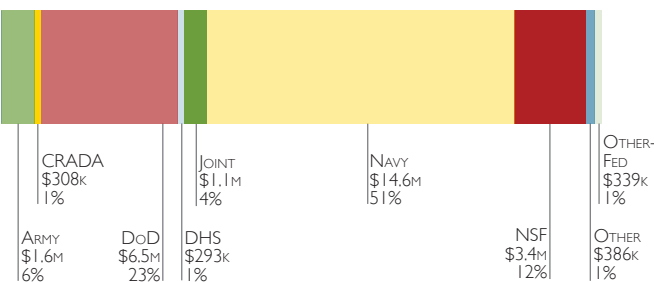
The Joint Interagency Field Experimentation Program explores specialized solutions for capability gaps, provides a venue to assess, develop, counter, and exploit emerging capabilities, and examines dual capabilities for homeland security, stabilization, reconstruction, and disaster/humanitarian assistance.

TOTAL EXPENDITURES: \$28.4M

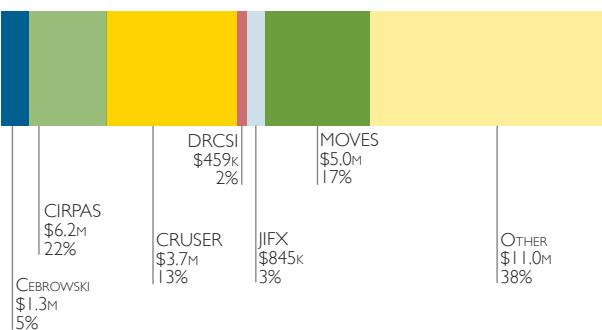
BY TYPE OF ACTIVITY.....



BY SPONSOR



BY INSTITUTE/CENTER



ADDITIONAL RESEARCH FACTS FOR FY14

20 new Cooperative Research and Development Agreements (CRADAs) or Limited-Purpose CRADAs were executed. Partners were Arcturus UAV, LLC, Boston Micromachines Corporation, Bubbleology Research, Inc., City of Los Angeles, Dell, Inc., HyPerComp, Inc., LIG Nex I, NTT IT Corporation, Office of the Sheriff, County of Monterey, Onvoi, LLC, Purdue University, SAAB AB, Business Area Electronic Defence Systems, The Oxnard Harbor District, The Port of Hueneme, Unconventional Concepts, Inc., University of Maryland, University of Southern California, University of Texas at Austin, zSpace, Inc.

- 1411 degrees were conferred, including:
- | | |
|--|------------------------|
| 36 Advanced Degrees (Ph.D., Engineer) | 753 Masters of Science |
| 258 Masters of Business Administration | 269 Masters of Arts |
| 27 Masters of Engineering | 68 Masters |
- Seven Space and Naval Warfare Systems Center Fellowships were awarded to NPS students.
 - 26 National Research Council Research Associates were on tenure at NPS.
 - Ten visiting faculty members from the Engineer and Scientist Exchange Program were hosted.
 - Ten patents were issued, 22 patent applications were filed, 13 new inventions disclosures..